

Papers Presented at Scientific Meetings

Corrosion of Structural Materials by Lead-Based Reactor Coolants

D. P. Abraham, L. Leibowitz, V. A. Maroni, S. M. McDevitt, and A. G. Raraz
Presented at the IAEA Technical Committee Meeting on Core Physics and Engineering Aspects of Emerging Nuclear Energy Systems for Energy Generation and Transmutation, Argonne National Laboratory, Argonne, IL, November 28–December 1, 2000

Fuel Processor Development at Argonne National Laboratory

S. Ahmed, D. V. Applegate, J.-M. Bae, B. Bergin, J. D. Carter, J. P. Kopasz, T. R. Krause, J. Krebs, S. H. D. Lee, D. J. Myers, C. Pereira, L. Ruscic, and M. Krumpelt
Presented at the Army Research Office Workshop on Fuel Processing for Polymer Electrolyte Fuel Cells, Romulus, MI, June 19–21, 2000

Integrated Fuel Processor Development

S. Ahmed, S. H. D. Lee, E. Doss, C. Pereira, D. Colombo, and M. Krumpelt
Presented at the Annual National Laboratory R&D Meeting of the DOE Fuel Cells for Trans. Prog., Pacific Northwest National Laboratory, Richland WA, June 7–8, 2000

Fuel Processing for Fuel Cells

S. Ahmed, C. Pereira, J.-M. Bae, and M. Krumpelt
Presented to the DOD Diesel Fuel Reforming Coordination Meeting, Fort Belvoir, VA, April 18, 2000

Source of Impedance Rise in Lithium-Ion High Power Batteries

K. Amine
Presented at the Battery Workshop, Rome, Italy, June 5–6, 2000

Development of High Power Batteries

K. Amine, G. L. Henriksen, S. Rogers, and R. Sutula
Presented at the Power Source Meeting, Cherry Hill, NJ, June 11–15, 2000

Surface Phenomena Responsible for Impedance Rise in Lithium-Ion High-Power Batteries

K. Amine, J. Luo, J. Liu, C. Chen, and D. R. Vissers
Presented at the Workshop on Interfaces, Phenomena, and Nano Structures in Lithium Batteries, Argonne National Laboratory, Argonne, IL, December 11–13, 2000

Batteries and Fuel Cells for Hybrid and Electric Vehicles

V. S. Battaglia
Presented at the 2nd 2015 Future Threat Technologies Panel, CIA Headquarters, McLean, VA, August 4, 2000

Histographic Analysis of the Microstructure of Ag/Bi-2223 Composite Conductors

R. M. Baurceanu, N. N. Merchant, A. K. Fischer, V. A. Maroni, and R. D. Parella
Presented at the Min., Met. and Mater. Soc. Annual Meeting and Exhibition,
Nashville, TN, March 12–16, 2000

First Principles Calculations for InSb-Li Battery Anodes

R. Benedek, M. M. Thackeray, L. H. Yang, and R. Prasad
Presented at the 103rd Annual Meeting of the Am. Ceram. Soc.,
San Francisco, CA, September 6–9, 2000

Intermetallic Anode Materials for Li Batteries

R. Benedek, J. T. Vaughan, M. M. Thackeray, L. H. Yang, and R. Prasad
Presented at the 102nd Annual Meeting of the Am. Ceram. Soc., St. Louis, MO,
April 30–May 3, 2000

Accelerated Calendar Life Studies of Gen 1 Cells

I. Bloom, C. Motloch, and T. Unkelhaeuser
Presented at the DOE Advanced Technology Development Program Peer Review,
Washington, DC, May 2–3, 2000

Analysis for Chemical Agents to Support the U.S. EPA's Region 5 Emergency Response Branch

A. S. Boparai, J. F. Schneider, and L. L. Reed
Presented at the Eighth Int. Conf. On-Site Analysis Meeting, Lake Las Vegas,
NV, January 23–26, 2000

The Impact of Brannerite on the Release of Plutonium and Gadolinium during the Corrosion of Zirconolite-Rich Titanate Ceramics

D. B. Chamberlain, A. J. Bakel, E. C. Buck, M. C. Hash, C. J. Mertz, M. K. Nole,
J. K. Basco, and S. F. Wolf
Presented at the Am. Nuclear Soc. Meeting, San Diego, CA, June 5–9, 2000

Lithium Conductivity of a Perovskite-Type Li-Sr-Ta-Zr-O Solid Electrolyte

C. H. Chen, K. Amine, E. Sperling, and G. L. Henriksen
Presented at the Materials Research Soc. Meeting, Boston, November 27–
December 1, 2000

Production of Mo-99 from LEU Targets Acid-Side Processing

C. Conner, J. Sedlet, T. C. Wiencek, D. J. McGann, G. L. Hofman, and G. F. Vandegrift
Presented at the Meeting on Reduced Enrichment for Research and Test Reactors,
Las Vegas, NV, October 1–6, 2000

Technical Presentations

J. C. Cunnane, P. A. Finn, S. F. Wolf, W. L. Ebert, J. Fortner, C. J. Mertz, and R. J. Finch
Presented at the U.S. Nuclear Regulatory Commission, DOE-NV/OQA Quality Assurance Audit, Argonne National Laboratory, Argonne, IL, October 24–26, 2000

Challenges Facing Air Management for Fuel Cell Systems

P. B. Davis, R. D. Sutton, and F. W. Wagner
Presented at the Int. Symp. on Automotive Technology and Automation, Dublin, Ireland, September 26, 2000

The U. S. Department of Energy Fuel Cells for Transportation Program

P. R. Devlin and W. F. Podolski
Presented to the Japan Electric Vehicle Association, Tokyo, Japan, September 13, 2000

The U. S. Department of Energy Fuel Cells for Transportation Program

P. R. Devlin and W. F. Podolski
Presented at the Fuel Cell Commercialization Policy Meeting, Ministry for Int. Trade and Industry, Tokyo, Japan, September 12, 2000

The U. S. Department of Energy Fuel Cells for Transportation Program

P. R. Devlin and W. F. Podolski
Presented to the Japan Automotive Research Institute, Tsukuba City, Japan, September 12, 2000

Automotive Fuel Cell System Design Points, Efficiency Targets, and Tradeoffs to Achieve PNGV Goal 3

E. D. Doss, R. Ahluwalia, R. Kumar, and M. Krumpelt
Presented at the Fuel Cell Targets Workshop, Arlington, VA, April 5–6, 2000

Transportation Fuel Cell Systems Modeling and Analysis

E. Doss, R. K. Ahluwalia, H. K. Geyer, R. Kumar, and M. Krumpelt
Presented at the Annual National Laboratory R&D Meeting of the DOE Fuel Cells for Transportation Program, Pacific Northwest National Laboratory, Richland, WA, June 7–8, 2000

Fuel-Flexible Automotive Fuel Cell Power System

W. E. Ernst, J. R. Boyer, D. L. Ho, and W. F. Podolski
Presented at the Future Car Congress, Arlington, VA, April 2–6, 2000

Microwave-Accelerated Acid Dissolution of Lithium Aluminate

A. M. Essling and D. G. Graczyk
Presented at the Pittcon Conf., Sci. for the 21st Century, New Orleans, LA, March 12–17, 2000

Degradation Modeling of the ANL Ceramic Waste Form

T. H. Fanning and L. R. Morss

Presented at the Topical Meeting on DOE Spent Nuclear Fuel and Fissile Materials Management Meeting, San Diego, CA, June 4–8, 2000

Mineralogy of Nuclear-Waste Disposal: Comparing Experiments and Nature

R. J. Finch

Presented at University of Missouri-Rolla, Rolla, MO, March 15, 2000

Uranium: Mineralogy, Geochemistry and the Environment

R. J. Finch

Presented at Purdue University, Lafayette, IN, February 24, 2000

Actinide and Lanthanide Host Phases Formed during the Corrosion of Nuclear-Waste Form

R. J. Finch, E. C. Buck, J. Fortner, C. J. Mertz, S. F. Wolf, P. A. Finn, W. L. Ebert, and J. C. Cunnane

Presented at the Am. Chem. Soc. Meeting, San Francisco, CA, March 26–30, 2000

Accessory Minerals and Alteration of Nuclear Waste Forms: Insights and Comparisons

R. J. Finch, E. C. Buck, J. Fortner, and S. F. Wolf

Presented at the American Geophysical Union Spring Meeting, Washington, DC, May 30–June 3, 2000

Small Angle X-ray Scattering from Synthetic Yucca Mountain Groundwater Colloids

J. Fortner, C. J. Mertz, and E. C. Buck

Presented at the Geol. Soc. Am. Conf., Reno, NV, November 9–18, 2000

Determination of Transmutation Effects in Crystalline Waste Forms

J. Fortner, D. T. Reed, R. E. Gerald, and A. J. Kropf

Presented at the Environmental Management Science Program National Workshop, Atlanta, GA, April 24–28, 2000

Standard Practice for the Design and Fabrication of Gloveboxes for the Containment of Materials that Emit Low-Penetrating Ionizing Radiation

A. A. Frigo

Presented at the 14th Annual Conf. and Exposition of the Am. Glovebox Soc., New Orleans, LA, August 21–23, 2000

The ACT External HEPA Push-Through Filter Assembly

A. A. Frigo, S. G. Wiedmeyer, D. E. Preuss, E. F. Bielick, and R. F. Malecha

Presented at the 14th Annual Conf. and Equipment Exhibit of the Am. Glovebox Soc., New Orleans, LA, August 21–23, 2000

Nuclear Magnetic Resonance of Nano-Structures by Levitation in Supercritical Fluids

R. E. Gerald

Presented at the First Meeting on Emerging Nanotechnologies, Kraft Foods, Inc., Skokie, IL, January 17–18, 2000

The Excitement and Process of Inventing

R. E. Gerald

Presented at the Summer 2000 Community College Internship, Argonne National Laboratory, Argonne, IL, July 26, 2000

Passively Shimmied Toroid Cavity Detectors

R. E. Gerald, E. Growney, and J. W. Rathke

Presented at the University of Bonn, Institute of Physical and Theoretical Chemistry, Bonn, Germany, December 15, 2000

Application of the Near Electrode Imager to Lithium Polymer Electrolyte Battery Systems

R. E. Gerald, R. J. Klinger, and J. W. Rathke

Presented at the Structure, Dynamics and Charge Transport in Polymeric Materials Theory Workshop, Argonne National Laboratory, Argonne, IL, June 19–23, 2000

Disclosure of the Rotational Exchange Gradient Imager

R. E. Gerald, R. J. Klinger, and J. W. Rathke

Presented at the 42nd Rocky Mountain Conf. on Analytical Chemistry, Denver, CO, July 30–August 2, 2000

Fundamental NMR Investigations of Conduction Ions in Anode and Electrolyte Materials Using the Near Electrode Imager

R. E. Gerald, R. J. Klingler, and J. W. Rathke

Presented at the 50th Am. Crystallographic Association Conf., St. Paul, MN, June 22–27, 2000

Introduction to Toroid Cavity NMR Imagers

R. E. Gerald, R. J. Klingler, and J. W. Rathke

Presented at the Department of Chemistry, Northeastern Illinois University, Chicago, IL, November 1, 2000

New TCD Inventions for NMR Investigations at Electrode Surfaces

R. E. Gerald, R. J. Klingler, and J. W. Rathke

Presented at the University of Bonn, Institute of Physical and Theoretical Chemistry, Bonn, Germany, December 16, 2000

A New NMR Detector for Investigation of SAMs

R. E. Gerald and J. W. Rathke

Presented at the University of Bonn, Institute of Physical and Theoretical Chemistry, Bonn, Germany, December 19, 2000

In-situ Multinuclear NMR Studies of Lithium Batteries

R. E. Gerald, J. Sanchez, R. J. Klingler, and J. W. Rathke

Presented at the Workshop on Interfaces, Phenomenon, and Nanostructures in Lithium Batteries, Argonne National Laboratory, Argonne, IL, December 11–13, 2000

Coin-Cell Battery NMR Imager

R. E. Gerald, J. Sanchez, R. J. Klingler, and J. W. Rathke

Presented at the University of Bonn, Institute of Physical and Theoretical Chemistry, Bonn, Germany, December 21, 2000

Corrosion Testing of Spent Nuclear Fuel Performed at Argonne National Laboratory for Repository Acceptance

M. M. Goldberg

Presented at the Min., Met. and Mater. Soc. Meeting, St. Louis, MO, October 8–12, 2000

Role of Analytical Laboratories within EM

D. W. Green

Presented at the NAMP 2K Conf., National Initiatives towards Analytical Excellence, Gaithersburg, MD, June 6–8, 2000

Role of Analytical Laboratories within EM

D. W. Green

Presented at the 18th Meeting of the DOE Analytical Managers Group, Denver, CO, August 14–17, 2000

New Catalyst Technology for the Direct Oxidation of Benzene to Phenol

C. Hamilton, E. A. Gardner, L. Iton, C. L. Marshall, S. Alerasool, P.E. Mayuririk, P. C. Y. Yeh, F. M. Dautzenberg, R. Overbeek, G. McRae, E. Meeks, M. Neurock, H. H. Kung, and K. Popp

Presented at the National Laboratory Catalysis Research Conf. Argonne National Laboratory, Argonne, IL, October 12–13, 2000

Test and Diagnostic Methods Used to Study Interface Phenomena in High-Power Lithium-Ion Cells

G. L. Henriksen

Presented at the Workshop on Interfaces, Phenomena, and Nanostructures in Lithium Batteries, Argonne National Laboratory, Argonne, IL, December 11–13, 2000

Diagnostic Studies on High-Power Lithium-Ion Cells for Hybrid Electric Vehicle Energy Storage

J.-S. Hong, J. Liu, A. Newman, and K. Amine

Presented at 198th Meeting of the Electrochem. Soc., Phoenix, AZ,
October 22–27, 2000

High-Precision Determination of Lithium and Aluminum by Inductively Coupled Plasma-Atomic Emission Spectrometry

D. R. Huff, D. G. Graczyk, and S. J. Lopykinski

Presented at the Pittcon Conf., Sci. for the 21st Century, New Orleans, LA,
March 12–17, 2000

8-fluoro-8methyl-calix[4]pyrole: An NMR Study of Neutral Anion Receptor

C. R. Jones, R. E. Gerald, M. J. Chen, R. J. Klingler, J. W. Rathke, M. Marquez, and
R. D. Kraft

Presented at the SMASH NMR Symp., Argonne National Laboratory, Argonne,
IL, July 16–19, 2000

Fuel Cell Technology for Navy Shipboard Application

E. J. Karell

Presented at the Naval Engineering Workshop, Washington, DC,
February 13, 2000

The Effect of Actinides on the Microstructural Development in a Metallic High-Level Nuclear Waste Form

D. D. Keiser, W. Sinkler, D. P. Abraham, J. W. Richardson, and S. M. McDevitt

Presented at the Miner., Met., and Mater. Soc. Meeting, Nashville, TN,
March 12–16, 2000

The Effect of Substitution of $\text{LiNi}_{1-x}\text{M}_x\text{O}_2$ System for High Power Application

J. Kim and K. Amine

Presented at the 198th Meeting of the Electrochem. Soc., Phoenix, AZ,
October 22–27, 2000

Polymerizing Clusters in the Solid State: Structure and Bonding in Sr_3Sn_5

M. Klem, J. Harp, J. T. Vaughey, and J. D. Corbett

Presented at the Gordon Conf. on Solid State Chemistry, Colby-Sawyer College,
New London, NH, July–August 2000

High-Pressure NMR Characterization of Micellar Systems for Catalysis

R. J. Klingler, D. Fremgen, R. E. Gerald, and J. W. Rathke

Presented at the National Laboratory Catalysis Conf., Argonne National
Laboratory, Argonne, IL, October 12–13, 2000

NMR Imaging of Fuel Cell and Battery Components

R. J. Klingler, R. E. Gerald, and J. W. Rathke

Presented at the University of Chicago Review of the Chemical Technology Division, Argonne National Laboratory, Argonne, IL, September 13, 2000

Fuel Issues for Fuel-Cell Vehicles

J. P. Kopasz

Presented at the CMT Technical Seminar, Argonne National Laboratory, Argonne, IL, July 28, 2000

Effects of Gasoline Components on Fuel Processing and Implications for Fuel Cell Fuels

J. P. Kopasz, D. V. Applegate, L. Ruscic, and S. Ahmed

Presented at the Fuel Cell Seminar, Portland, OR, October 29–November 2, 2000

Effect of Fuels/Contaminants on Reforming Catalyst Performance and Durability

J. Kopasz, D. V. Applegate, L. Ruscic, S. Ahmed, and M. Krumpelt

Presented at the Annual National Laboratory Meeting of DOE's Fuel Cells for Transportation Progress, Richland, WA, June 7–8, 2000

Development of New Catalysts for Reforming Hydrocarbon Feedstocks

T. R. Krause, J. D. Carter, J. P. Kopasz, J.–M. Bae, S. Ahmed, and M. Krumpelt

Presented at the National Laboratory Catalysis Research Conf., Argonne National Laboratory, Argonne, IL, October 12–13, 2000

Gasoline—How its Composition Affects Reforming and the Implication for Developing New Catalysts for On-Board Reforming for Fuel Cell Vehicles

T. R. Krause, J. P. Kopasz, S. Ahmed, and M. Krumpelt

Presented at the Am. Inst. of Chem. Eng. Meeting, Los Angeles, CA, November 12–17, 2000

Sulfur Removal from Reformate

T. R. Krause, R. Kumar, and M. Krumpelt

Presented at the R&D Meeting of the DOE Fuel Cells for Transportation Program, Pacific Northwest National Laboratory, Richland, WA, June 7–8, 2000

In-Situ XAFS of Intermetallic Insertion Electrodes for Lithium-Ion Batteries: A Study of Li_xInSb

A. J. Kropf, C. S. Johnson, M. M. Thackeray, J. T. Vaughey, and H. Tostmann

Presented at the Tenth Users Meeting for the Advanced Photon Source, Argonne National Laboratory, Argonne, IL, May 2–4, 2000

The Role of Cobalt in (Co)MoS₂ Hydrosulfurization Catalysts

A. J. Kropf and C. L. Marshall

Presented at the National Laboratory Catalysis Conf., BP Amoco Research Center, Naperville, IL, October 12–13, 2000

EXAFS of (Co)MoS₂ Hydrodesulfurization Catalysts

A. J. Kropf, C. L. Marshall, J. T. Miller, and K. A. Kunz

Presented at the Catalysis Club of Chicago, Chicago, IL, May 11, 2000

Difference Analysis of the EXAFS of (Co)MoS₂ Hydrosulfurization Catalysts

A. J. Kropf, C. L. Marshall, D. Wei, J. T. Miller, and K. Kunz

Presented at the Tenth Users Meeting for the Advanced Photon Source, Argonne National Laboratory, Argonne, IL, May 2–4, 2000

Catalytic Autothermal Reforming for Fuel Cell Systems

M. Krumpelt, J. D. Carter, R. Wilkenhoener, S. H. D. Lee, J-M. Bae, and S. Ahmed

Presented at the Fuel Cell Seminar, Portland, OR,
October 30–November 2, 2000

Catalytic Autothermal Reforming

M. Krumpelt, T. Krause, J. Kopasz, R. Wilkenhoener, and S. Ahmed

Presented at the Annual National Laboratory Meeting of DOE's Fuel Cells for Transportation Progress, Richland, WA, June 7–8, 2000

Fuel Processing Considerations: Cold Start, Transients, Coking, and Related Issues

R. Kumar

Presented at the National Research Council/Fuel Cell Meeting, USCAR, Southfield, MI, January 12, 2000

Catalysts in Automotive Fuel Cell Systems

R. Kumar

Presented at the Int. Conf. on Elementary Processes in Molecule-Metal Surface Interactions, San Juan, Puerto Rico, November 11–15, 2000

Separations Technologies Supporting the Development of a Deployable ATW System

J. J. Laidler

Presented at Waste Management 2000, Tucson, AZ, February 28–March 2, 2000

Pyrochemical Separations Technologies Envisioned for the U.S. Accelerator Transmutation of Waste System

J. J. Laidler

Presented at the Pyrochemical Workshop, Avignon, France, March 14–15, 2000

Chemical Separations Technologies for the U.S. Accelerator Transmutation of Waste Program

J. J. Laidler

Presented at the IAEA Technical Committee Meeting on Core Physics and Engineering Aspects of Emerging Nuclear Energy Systems for Energy Generation and Transmutation, Argonne National Laboratory, Argonne, IL, November 29, 2000

Pyrochemical Processing of Irradiated Transmuter Fuel

J. J. Laidler

Presented at OECD-NEA 6th Information Exchange Meeting on Actinide and Fission Production Partitioning and Transmutation, Madrid, Spain, December 11–15, 2000

Developing Separations Technologies and Waste Forms for the Accelerator Transmutation of Waste (ATW)

J. J. Laidler, S. M. McDevitt, M. A. Williamson, J. L. Willit, D. P. Abraham, and K. V. Gourishankar

Presented at the Min., Met. and Mat. Soc. Meeting, St. Louis, MO, October, 8–12, 2000

Fuel-Flexible Fuel Processor for Reforming Hydrocarbon Fuels

S. H. D. Lee, C. Pereira, S. Ahmed, and M. Krumpelt

Presented at Am. Inst. of Chem. Eng., Los Angeles, CA, November 12–17, 2000

Interaction of Molten Chloride Salts and Zeolite 4A: Nature, Thermodynamics, and Application to Nuclear Waste Treatment and Disposal

D. Lexa, L. Leibowitz, A. J. Kropf, and I. Johnson

Presented at the Austrian Research Center-Seibersdorf, Vienna, Austria, April 14, 2000

Interaction of Molten Chloride Salts and Zeolite 4A: Nature, Thermodynamics, and Application to Nuclear Waste Treatment and Disposal

D. Lexa, L. Leibowitz, A. J. Kropf, and I. Johnson

Presented at the Tenth Int. IUPAC Conf. on High Temperature Materials Chemistry, Julich, Germany, April 10, 2000

Analysis and Modeling of Microscopic Radiation Effects on Nuclear Waste Forms

G. K. Liu, J. Luo, H. Z. Zhuang, J. Beitz, V. Zhorin, and V. Williams

Presented at the DOE EMSP Workshop, Atlanta, GA, April 25–27, 2000

Specialized Cell and HRTEM Studies Elucidate Impedance Rise in High-Power Lithium-Ion Cells

J. Liu, C. H. Chen, J. S. Luo, G. L. Henriksen, and K. Amine

Presented at 198th Meeting of the Electrochem. Soc., Phoenix, AZ, October 22–27, 2000

Microstructural Characterization of Halite Inclusions in a Glass-Bonded Ceramic Waste Form

J. S. Luo and W. L. Ebert

Presented at the 102nd Am. Chem. Soc. Meeting, St. Louis, MO, April 30–May 3, 2000

Microstructural Characterization of a Surrogate Glass-Bonded Ceramic Waste Form

J. S. Luo, V. N. Zyryanov, and W. L. Ebert

Presented at the 102nd Am. Ceram. Soc. Meeting, St. Louis, MO,
April 30–May 3, 2000

Nanophase Support Materials as Catalysts for Ultra-Deep Sulfur Removal from Crude Oil and Transportation Fuels

D. Mahajan and C. L. Marshall

Presented at the National Laboratory Catalysis Research Conf., Argonne National Laboratory, Argonne, IL, October 12–13, 2000

The Evolution of CMT Gloveboxes

R. F. Malecha, A. A. Frigo, and D. E. Preuss

Presented at the Annual Conf. and Equipment Exhibit of the Am. Glovebox Soc.,
New Orleans, LA, August 21–23, 2000

Discussion on the Use of Matrix Diffusion Model after a Multidisciplinary Study of a Granitic Boulder Sample

N. Marcos, M. Siitari-Kauppi, J. Suksi, K. Rasilainen, R. J. Finch, E. Flitsiyan, and
K.-H. Hellmuth

Presented at the 24th Symp. on the Scientific Basis for Nucl. Waste Management,
Sydney, Australia, August 26–31, 2000

Phase Chemistry Considerations in the Processing of State-of-the-Art Ag/Bi-2223 Composite Conductor

V. A. Maroni, R. M. Baurceanu, N. N. Merchant, A. K. Fischer, and R. D. Parrella

Presented at the Thermec 2000 Int. Conf. on Processing and Manufacturing of
Advanced Materials, Las Vegas, NV, December 4–8, 2000

Characterization of Coated Conductor Phase Purity, Oxygen Stoichiometry, Defect Structures, and In-Plane Texture by Spectroscopic and Synchrotron X-ray Methods

V. A. Maroni, A. K. Fischer, A. J. Kropf, H. You, Y. Jee, K. T. Wu, M. W. Rupich,
Q. Li, C. Thieme, and W. Zhang

Presented at the Fall Meeting of Materials Research Soc., Boston, MA,
November 27–December 1, 2000

The Investigation of Phase Evolution in Composite Ceramic Superconductors Using Raman Microscopy Techniques

V. A. Maroni, A. K. Fischer, and K. T. Wu

Presented at the Sixth Int. Conf. on Materials and Mechanisms of
Superconductivity and High Temperature Superconductors, Houston, TX,
February 20–25, 2000

New Mesoporous Supports for the Desulfurization of Diesel and Heavy Oils

C. L. Marshall

Presented at the Chicago Section, American Chemical Soc., Chicago, IL,
February 25, 2000

Combinational Catalyst Testing

C. L. Marshall

Presented at the Great Lakes Chinese Chemical Society Meeting,
Arlington Heights, IL, August 19, 2000

Catalysis Research at Argonne National Laboratory

C. L. Marshall

Presented at the C1 Upgrading Meeting, Hedgesville, WV, August 1, 2000

Ab Initio Investigation of the Hydrodesulfurization Process

C. L. Marshall, J. R. Brenner, J. L. Tilson, M. Palmer, and A. Dutoi

Presented at the Catalysis Club of Chicago, Chicago, IL, May 11, 2000

The Pyrolysis of Methane over Liquid Metal to Form Hydrogen and Carbon

C. L. Marshall, M. A. Lewis, L. Leibowitz, and D. Lewis

Presented at the First Information Meeting on Nuclear Production of Hydrogen,
Paris, France, October 2–3, 2000

New Supports for the Desulfurization of Diesel and Heavy Oils

C. L. Marshall, L. Ruscic, D. Wei, L. Xu, K. A. Carradao, and D. Banerjee

Presented at the National Petroleum Technology Office Program Review,
Denver, CO, June 29, 2000

Hydrodesulfurization Activity and Selectivity of MCM-41 Supported Catalysts

C. L. Marshall, D. Wei, L. Ruscic, L. Xu, and K. A. Carrado

Presented at the National Laboratory Catalysis Research Conf., Argonne National
Laboratory, Argonne, IL, October 12–13, 2000

Materials Research for Nuclear Energy Applications

S. M. McDevitt

Presented at the Graduate Seminar, University of Cincinnati, Cincinnati, Ohio,
May 12, 2000

Fuel for a Once-Through Cycle-(Th,U)O₂ in a Metal Matrix

S. M. McDevitt

Presented at the Center for Reactor Information, Argonne National Laboratory,
Argonne, IL, September 29, 2000

Reactive Wetting in Refractory Metal/Ceramic Oxide Systems

S. M. McDeavitt, G. W. Billings, and J. E. Indacochea

Presented at the Miner., Met. and Mater. Soc. Meeting, St. Louis, MO, October 8–12, 2000

The Development, Processing and Qualification of Ceramic and Metal Waste Forms from the Electrometallurgical Treatment of Spent Nuclear Fuel

S. M. McDeavitt, K. M. Goff, D. P. Abraham, W. L. Ebert, M. C. Hash, S. G. Johnson, D. D. Keiser, D. Lexa, T. P. O'Holleran, M. K. Richmann, M. F. Simpson, and B. R. Westphal

Presented at the Miner., Met., and Mater. Soc. Meeting, St. Louis, MO, October 8–12, 2000

Colloids Generated from Metallic Uranium Fuel

C. J. Mertz, J. Fortner, M. M. Goldberg, and C. Shelton-Davis

Presented at the Miner., Met., and Mater. Soc. Meeting, St. Louis, MO, October 8–12, 2000

Structural Studies of Bulk and Powder-in-Tube Bi-1212 by Transmission Electron Microscopy

D. J. Miller, Z. P. Luo, N. M. Murphy, S. E. Dorris, V. A. Maroni, and H. Claus

Presented at the 102nd Annual Meeting of the Am. Ceram. Soc., St. Louis, MO, April 30–May 3, 2000

Ternary Oxides of the Actinides with Alkali and Alkaline Earth Elements: Stability and Acid-Base Relationships

L. R. Morss

Presented at the Symp. in Honor of P. A. G. O'Hare, 16th IUPAC Conf. on Chemical Thermodynamics, Halifax, Nova Scotia, Canada, August 6–11, 2000

Uranium and Plutonium Release from Glass-Bonded Sodalite

L. R. Morss, W. L. Ebert, L. D. Hafenrichter, M. C. Hash, M. A. Lewis, D. Lexa, J. S. Luo, C. J. Mertz, L. E. Putty, M. K. Richmann, M. K. Nole, and V. N. Zyryanov

Presented at the Am. Chem. Soc. Meeting, San Francisco, CA, March 26–30, 2000

Corrosion Rates of Sodalite and Glass-Bonded Sodalite, A Nuclear Waste Form, as Function of pH and Temperature

L. R. Morss, R. Miles, M. Stanley, and C. D. Tatko

Presented at the 10th Int. Symp. on Thermodynamics of Nuclear Materials and 16th IUPAC Conf. on Chemical Thermodynamics, Halifax, Nova Scotia, Canada, August 6–11, 2000

Phase Formation and Superconductivity in PIT-Type (Bi,Pb)-1212

N. M. Murphy, S. E. Dorris, D. J. Miller, Z. P. Luo, H. Claus, and V. A. Maroni
Presented at the Sixth Int. Conf. on Materials and Mechanisms of
Superconductivity and High-Temperature Superconductivity, Houston, TX,
February 20–25, 2000

Design and Modeling of Cylindrical and Flat Wound $\text{LiN}_{0.8}\text{Co}_{0.2}\text{O}_2/\text{C}$ Lithium Ion Cells for
PNGV Application

P. A. Nelson, G. L. Henriksen, and K. Amine
Presented at the 198th Meeting of the Electrochem. Soc., Phoenix, AZ,
October 22–27, 2000

Study of Battery State-of-Charge Control for HEVs by Means of Vehicle Simulation

P. A. Nelson, G. L. Henriksen, and K. Amine
Presented at the 198th Meeting of the Electrochem. Soc., Phoenix, AZ,
October 22–27, 2000

Commuter Simulation of Lithium-Ion Battery Performance in Hybrid Electric Vehicles

P. A. Nelson, G. L. Henriksen, and K. Amine
Presented at the 198th Electrochemical Society Meeting, Phoenix, AZ,
October 22–27, 2000

Differential Scanning Calorimetry Study: Kinetics and Thermodynamics of Electrode Reactivity
for Lithium-Ion Cells

A. E. Newman, C. H. Brubaker, G. L. Henriksen, and K. Amine
Presented at the 197th Electrochem. Soc. Meeting, Toronto, Canada, May 14–18,
2000

Bifunctional Catalysts for Selective NO_x Reduction

M. K. Neylon and C. L. Marshall
Presented at the 2000 National Laboratory Catalysis Research Conf., Argonne
National Laboratory, Argonne, IL, October 12–13, 2000

Liquid Fuel Reformer Development

C. Pereira, S. Ahmed, J.-M. Bae, and M. Krumpelt
Presented at the Annual Meeting of DOE's Hydrogen Program, San Ramon, CA,
May 9–11, 2000

Catalytic Reforming of Gasoline and Diesel Fuel

C. Pereira, R. Wilkenhoener, S. Ahmed, and M. Krumpelt
Presented at the Am. Inst. Chem. Eng. Meeting, Atlanta, GA, March 5–9, 2000

A Vertical Transfer Lock for Large Gloveboxes

D. E. Preuss, A. A. Frigo, and R. F. Malecha

Presented at the 13th Annual Conf. and Equipment Exhibit of the Am. Glovebox Soc., New Orleans, LA, August 21–23, 2000

Medium Temperature Cathode Materials for Solid Oxide Fuel Cells

J. M. Ralph, J. T. Vaughey, and M. Krumpelt

Presented at the Fuel Cell Seminar, Portland, OR, October 30–November 2, 2000

High-Pressure NMR Studies of Methane Hydrate

J. W. Rathke, R. J. Klingler, M. J. Chen, and R. E. Gerald

Presented at the National Methane Hydrate Workshop, Argonne National Laboratory, Argonne, IL, September 13, 2000

Supercritical Carbonylation Catalysis

J. W. Rathke, R. J. Klingler, M. J. Chen, and L. M. Wojcinski

Presented at the Am. Chem. Soc. Meeting, San Francisco, CA, March 26–31, 2000

High-Pressure NMR Studies of Supercritical Carbonylation Catalysis

J. W. Rathke, R. J. Klingler, M. J. Chen, and L. M. Wojcinski

Presented at the 2000 National Laboratory Catalysis Conf., Argonne National Laboratory, Argonne, IL, October 12–13, 2000

Oxidation/Reduction of Multivalent Actinides in the Subsurface

D. T. Reed, S. B. Aase, A. J. Kropf, and B. E. Rittmann

Presented at the Plutonium Futures Conf., Santa Fe, NM, July 10–13, 2000

Subsurface Actinide Microbiological Interactions: Effects on Actinide Speciation

D. T. Reed, S. B. Aase, T. Marks, B. Rittmann, J. Banaszak, A. Hermes, and W. Songkasiri

Presented at the MIT Seminar, Boston, MA, November 9, 2000

Plutonium and Uranium Disposition in a Sodalite/Glass Composite Waste Form via XAFS

M. K. Richmann, A. J. Kropf, D. T. Reed, S. B. Aase, M. C. Hash, L. Putty, and D. Lexa

Presented at the Plutonium Futures—Sci. Topical Conf., Santa Fe, NM, July 10–13, 2000

Large Sample MAS NMR Spectroscopy of Gas Hydrates

J. S. Schuetz, C. R. Jones, R. E. Gerald, R. J. Klingler, J. W. Rathke, V. Thieu, and Y. Halpern

Presented at the SMASH NMR Symp., Argonne National Laboratory, Argonne, IL, July 16–29, 2000

Stability of Spinel, Orthorhombic and Layered Lithium Manganese Oxides

Y. Shao-Horn, S. A. Hackney, C. S. Johnson, A. J. Kahaian, K. D. Kepler, E. Skinner,
J. T. Vaughey, and M. M. Thackeray

Presented at Int. Battery Assoc. Manganese Oxide Symposium, Argonne National
Laboratory, Argonne, IL, May 10–12, 2000

Modeling Inhibition and Toxicity of Uranium in the Citrate-*Pseudomonas* System

W. Songkasiri, D. T. Reed, and B. E. Rittmann

Presented at the 220th Am. Chem. Soc. National Meeting, Washington, DC,
August 20–24, 2000

EXAFS Investigation of Dissolved and Absorbed Pt Complexes Derived from CPA

W. A. Spieker, J. R. Regalbuto, A. J. Kropf, and J. T. Miller

Presented at the Tenth Users Meeting for the Advanced Photon Source, Argonne
National Laboratory, Argonne, IL, May 2–4, 2000

Status of Development of NAMP Information Systems

W. E. Streets, A. E. Scandora, J. S. Morton, and S. Woolf

Presented at the NAMP Database Working Group Meeting, Salt Lake City, UT,
February 3, 2000

The National Analytical Management Program's Laboratory Informational Network: NAMPnet

W. E. Streets, A. E. Scandora, J.S. Morton, and S. Woolf

Presented at the NAMP 2K, National Initiatives towards Analytical Excellence,
Gaithersburg, MD, June 6–8, 2000

Fuel Cell Issues for Fuel Cell Systems

R. D. Sutton

Presented at the Ninth Biennial Bioenergy 2000 Conf., Buffalo, NY,
October 17, 2000

DOE Fuels for Fuel Cells Research and Development

R. D. Sutton and P. Devlin

Presented at the Fuel Cells 2000 Conf., Palm Springs, CA, May 23, 2000

On Understanding the Effect of Hydrogen Interaction on Tritium Release from Lithium
Ceramics Breeder Materials

S.-W. Tam, A. Sutjianto, and R. Pandey

Presented at the 9th Int. Workshop, Hydrogen Isotope Recycling at Plasma-Facing
Materials in Fusion Reactors, Argonne National Laboratory, Argonne, IL,
September 20–22, 2000

Toroid Cavity NMR Detector for Operation at 600 MHz

M. A. ter Horst, R. E. Gerald, R. J. Klinger, and J. W. Rathke

Presented at the 41st Experimental NMR Conference, Pacific Grove, CA,
April 9–14, 2000

Phase Stability Domains of the (Bi,Pb-2223): Data Sources, Correlation, and Assessment

M. Tetenbaum, N. M. Murphy, S. E. Dorris, and V. A. Maroni

Presented at the Sixth Int. Conf. on Materials and Mechanisms of
Superconductivity and High Temperature Superconductors, Houston, TX,
February 20–25, 2000

From Gems to Lithium Battery Electrodes: The Significance of the Diamond, Ruby (Sapphire),
Spinel and Peridot Structures

M. M. Thackeray

Presented at the 10th Inter. Meeting on Lithium Batteries, Como, Italy,
May 28–June 2, 2000

The Reduction of UCl_3 , PuCl_3 , and Select Rare Earth Chlorides by Li-Al

Z. Tomczuk, E. J. Wesolowski, I. Johnson, and W. E. Miller

Presented at the 24th Actinide Separations Conference, Las Vegas, NV,
May 22–25, 2000